CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCSICO BAY REGION

ORDER NO. 91 - 039

WATER RECLAMATION REQUIREMENTS FOR:

MEADOWOOD RESORT, MEADOWOOD PARTNERSHIP AND
MEADOWOOD HOME OWNERS ASSOCIATION,
ST. HELENA, NAPA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board), finds that:

1. The Meadowood community is located in an unincorporated area of Napa County, east of the City of St. Helena, at 900 Meadowood Lane. The community consists of Meadowood Resort which is owned and operated by Meadowood Partnership, and the Madrone Knoll Subdivision which is collectively represented by Meadowood Homeowners Association.

2. The Meadowood Resort is a resort hotel with recreational facilities whose development is governed by a Development Agreement with Napa County. The resort is situated on a 74-acre site, with the major facilities located in the flat valley portion of a small canyon with steeply sloped sides covered with native vegetation and conifers. At present the resort consists of 59 overnight units; 10 day-use units; a nine-hole golf course; a clubhouse with two restaurants and several meeting rooms; a separate large meeting room; a two-bedroom house; administration office; accounting office; maintenance building; storage building; two swimming pools; pool area lockers and bar; seven tennis courts and a tennis shop; and a croquet lawn. Additional facilities planned for completion in 1991, which will complete full build-out of the resort development, include seven four-bedroom homes for weekly rental; a service addition to the clubhouse; a health spa; and one more tennis court.

3. The Madrone Knoll Subdivision is a residential subdivision, consisting of 37 single-family homes. The subdivision has three remaining undeveloped lots, but only one of these is contemplated to be developed.

4. Wastewater from the Meadowood community is handled by on-site collection, treatment and disposal facilities owned by Meadowood Partnership and operated by Meadowood Resort. Meadowood Resort, Partnership and Homeowners Association are hereinafter collectively called the Discharger.

5. The Discharger's wastewater treatment and disposal facilities are presently governed by Water Reclamation Requirements in this Board's Order No. 86-68. The Meadowood Partnership submitted a Report of Waste Discharge dated August 27, 1990 for reissuance of waste discharge requirements.

6. The Discharger's wastewater treatment system consists of three package wastewater treatment plants, a redwood chlorine contact tank, and on-site ponds for storage of treated, disinfected effluent. Plants 1 and 2 are located together in a single complex, beside Meadowood Lane at the resort entrance. Plant 3 is located along Silverado Trail, northwest of the Howell Mountain Road intersection, on the hillside above and east of Silverado Trail. The redwood chlorine contact tank is located on the hillside above and south of the resort's clubhouse. The storage ponds are located in the golf course, west of the clubhouse. Attachment A of this Order is a location map showing the site and the wastewater facilities.

7. Wastewater from all of the Meadowood Resort facilities and from 15 of the Madrone Knoll homes flows to the Plant 1 and 2 complex. Combined Plant 1 and 2 flows presently average about 18,000 gallons per day (gpd) (1990 annual average), and may reach 30,000 gpd at full development. Wastewater from the remaining 22 Madrone Knoll homes flows to Plant 3. Plant 3 flows presently average about 2,700 gpd (1990 annual average), and are not expected to change much in the future.

   Chlorinated effluent from the Plant 1 and 2 complex, and from Plant 3, is pumped to the redwood contact tank. Disinfected effluent from the redwood tank flows by gravity to the storage ponds. Stored effluent is then reclaimed and used for irrigation of the 20-acre golf course area through a fixed sprinkler system. During the dry season, pond water is supplemented by ground water from a nearby well used only for irrigation supply. The Discharger is both producer and user of the reclaimed wastewater.

8. The treatment process includes flow meters, comminutors, package treatment plants using an activated sludge process with aeration chambers and settling basins, followed by gravity filtration through multimedia filters, and disinfection by tablet chlorinators.

   Plants 1 and 2 are Chicago Pump model SA 4406 packaged plants, with a design treatment capacity of 15,000 gallons per day (gpd) each, and are operated in parallel, using a single influent comminutor followed by a flow distribution box. The Plant 1 and 2 complex includes a 34,000 gallon capacity concrete block influent flow equalization basin, a 7,500 gallon steel final effluent storage tank, a 7,000 gallon steel sludge holding tank, and a concrete block overflow containment structure of about 42,000 gallon capacity. The gravity line from the restaurants includes a 3,000 gallon grease trap, upstream of Plants 1 and 2. Sludge and grease solids are removed for disposal off-site by licensed disposal contractors.

   Plant 3 is a Chicago Pump Model SA 4405 packaged plant with a design treatment capacity of 7,500 gpd, and is operated independently of Plants 1 and 2.

9. There are presently two final effluent storage ponds. The larger one, Pond A, is the original pond, and has a surface area of about 25,000 square feet and maximum storage capacity of 1.5 million gallons (MG) (1.15 MG with two feet of freeboard remaining). Disinfected plant effluent discharges into this pond, and reclaimed water for golf course irrigation is withdrawn from this pond. The irrigation pumps and control equipment are located at the southeast end of the pond.

   At present the Pond A perimeter is unbermed and surface runoff from the golf course and other upslope areas drains into the pond at various points. The pond has an outlet channel at the southeast end, which runs toward the clubhouse, and then into a tunnel through the knoll on which the clubhouse is located. Overflows to the channel are restricted by a low flashboard structure. Although not permitted, pond overflows into the channel and tunnel have occurred in the past during periods of excessive rainfall and runoff. The tunnel reportedly has fast percolating soils, and typically little or no flow is observed at the far end of the tunnel.

   The smaller pond, Pond B, constructed in 1990, is located adjacent to and upslope of Pond A, and has a surface area of 11,000 square feet and maximum storage capacity of 0.86 MG (0.70 MG with two feet of freeboard remaining). This pond is bermed to prevent surface runoff inflow, and is connected to Pond A by valved piping to allow operation either in series with, or isolated from, Pond A.

10. The Discharger has been required by the Board to construct 2.5 MG additional storage pond capacity to provide a total storage capacity of 4.0 MG, and to divert surface runoff away from the storage pond(s). The 4.0 MG capacity was the level determined necessary for storage of projected sewage flows from the fully developed Meadowood facility, and direct precipitation into storage during the 5-month wet weather period of November through March, for a once-in-ten year wet season.

    In 1989 the Discharger proposed to provide increased storage through a program of phased pond construction and improved monitoring of actual storage uses and needs. The phased program was found acceptable since it would provide additional capacity, yet avoid construction of potentially excessive pond areas which, during dry weather, could create nuissance conditions and/or require increased ground water pumping to maintain acceptable minimum water levels.

    In 1990 the Discharger constructed Pond B, described ab ove, to provide additional storage capacity. During 1991, the Discharger plans to renovate Pond A to increase its maximum capacity to 2.4 MG (2.03 MG with two feet of freeboard remaining), and provide for diversion of surface runoff away from the pond. With this expansion of Pond A, the total

effluent storage capacity will be about 3.26 MG (about 2.73 MG with two feet of freeboard remaining). Further expansion of the storage capacity will then be deferred until such time as additional capacity is determined necessary, based on continued monitoring of actual storage pond uses.

11. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on December 17, 1986. The Basin plan identifies beneficial uses for surface water and ground water in the Napa Valley area.

12. The beneficial uses identified in the Basin Plan for the Napa River and contiguous waters include:

    a. Municipal and Domestic Supply
    b. Agricultural Supply
    c. Navigation
    d. Water Contact Recreation
    e. Non-contact Water Recreation
    f. Warm and Cold Fresh Water Habitat
    g. Wildlife Habitat
    h. Preservation of Rare and Endangered Species
    i. Fish Migration and Spawning

13. The beneficial uses identified in the Basin Plan for ground water in the Napa Valley area include:

    a. Municipal Supply
    b. Industrial Process Water Supply
    c. Industrial Service Supply
    d. Agricultural Supply.

14. Section 13523 of the California Water Code provides that a Regional Board, after consultation with and reception of recommendations from the State Department of Health Services, and if it is determined such action to be necessary to protect the public health, safety or welfare, shall prescribe water reclamation requirements for water which is used or proposed to be used as reclaimed water.

15. These water reclamation requirements are in conformance with the statewide water reclamation criteria established by the State Department of Health Services, as prescribed in Title 22, Section 60301 through Section 60355, California Code of Regulations.

16. This project involves the operation of existing privately-owned sewage treatment and disposal facilities with negligible expansion of use beyond that previously existing, and as such is exempt from the provisions of the California Environmental Quality Act (CEQA) in accordance with Title 14, Chapter 3, Section 15101 of the Califorina Code of Regulations.

17. The Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit written views and recommendations.

18. The Board, in a public hearing, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the Discharger, pursuant to the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

A. Prohibitions

1. The average daily flow for Plants 1 and 2 shall not exceed 15,000 gallons per day, for each plant. The average daily flow for Plant 3 shall not exceed 7,500 gallons per day.

2. The collection, treatment, storage, distribution or reuse of wastewater shall not create a pollution or nuisance as defined in Sections 13050 (l) and (m), respectively, of the California Water Code.

3. There shall be no bypass or overflow of untreated or partially wastewater or reclaimed water to waters of the State from the Discharger's wastewater collection, treatment, storage, distribution or disposal facilities.

4. Discharge of effluent from the ponds other than to the golf course irrigation area is prohibited, unless the Discharger has obtained written authorization from this Board's Executive Officer.

5. Reclaimed water shall not be applied to the reuse area, (a) when soils are saturated such that ponding or runoff is likely to occur, (b) during rainfall, or (c) when rainfall is expected to occur within 24 hours.

6. Reclaimed water shall not be allowed to escape from the authorized reuse area by airborne spray, nor by surface flow except in minor amounts associated with good irrigation practices.

7. Reclaimed water shall not be applied onto any walkways, passing vehicles, buildings, domestic water facilities or food handling facilities, or areas not under the Discharger's direct control.

8. The use of reclaimed water shall not degrade the quality of any groundwater used for domestic purposes or cause an increase in any quality parameter that would make groundwater unsuitable for irrigation use.

9. Discharge of toxic substances into the ponds which will disturb the pond's normal biological mechanisms is prohibited.

10. Reclaimed water shall not be used as a domestic or livestock animal water supply.

B. Reclaimed Water Use Specifications

Reclaimed Water Quality

1. The Discharger shall assure that the reclaimed water discharged to the storage ponds is at all times an adequately oxidized, disinfected wastewater that meets the following quality limits at all times:

   In any grab sample:

a. 5-day Biochemical Oxidation Demand	40.0 mg/l, maximum.
b. Dissolved Oxygen	1.0 mg/l, minimum.
c. Dissolved Sufides	0.1 mg/l, maximum.

   At any point downstream of the disinfection facilities where adequate contact with the disinfectant is assured:

   d.(i) The median number of Total Coliform organisms shall not exceed 23 MPN/100 ml as determined from the results of the last seven days for which analyses have been completed; and

   (ii) The number of Total Coliform organisms shall not exceed 240 MPN/100 ml in any two consecutive samples.

   e. Chlorine Residual 1.0 mg/l, minimum.

2. The Discharger shall discontinue the use of reclaimed water during any period when there is reason to believe that the limits specified in B.1. above are not being met. The use of reclaimed water shall not be resumed until all conditions which caused the limits specified in B.1. to be violated have been corrected.

Reclaimed Water Storage Ponds

3. Water at the surface of the ponds shall meet the following quality limits at all times, in any grab sample:

a. Dissolved Oxygen	2.0 mg/l, minimum
b. Dissolved Sulfide	0.1 mg/l, maximum
c. pH	6.0, minimum; 9.0, maximum.

4. To prevent the threat of overflows, a minimum freeboard of two (2) feet shall be maintained in the ponds at all times. Freeboard is the vertical distance between the water surface and (the lowest elevation of) the top of pond containment structure (perimeter dike, berm or outlet structure).

5. The ponds shall be managed and maintained to prevent surface runoff from entering the ponds, except in a controlled manner in accordance with a management plan approved by the Executive Officer.

6. The ponds shall be adequately protected from erosion, washout, and flooding from a rainfall event having a predicted frequency of once in 100 years.

7. Conspicuous warning signs shall be posted at adequate intervals around the ponds informing the public that the water contained therein is reclaimed wastewater which is not safe for drinking or contact. Signs shall be of sufficient size and proper wording to be clearly read.

Reclaimed Water Use/Golf Course Irrigation

8. The use of reclaimed water under this Order shall be restricted to irrigation of the golf course.

9. Irrigation with reclaimed water shall only occur at night or early morning when the public is absent and wind velocity is minimal.

10. Grounds irrigated with reclaimed water shall have maximum opportunity to dry before use by the public.

11. Irrigation with reclaimed water shall be managed so as to minimize ponding, to prevent odors or nuisance conditions, and to prevent ponding or saturated grounds which could provide breeding conditions for mosquitos or other vectors of public health significance.

12. Reclaimed water shall not be applied within 100 feet of houses or lodging facilities.

13. There shall be no irrigation or impoundment of reclaimed water within 100 feet of any well used for domestic or irrigation water supply.

14. All drinking water facilities and domestic supply wellheads within 500 feet of the reclaimed water use area shall be protected from direct or windblown reclaimed water spray.

15. Notices shall be printed on all score cards stating that reclaimed wastewater is used for golf course irrigation.

16. Exceptions to Specifications B.8, B.9, B.12 and B.13 above may be allowed under special circumstances, but require obtaining, in advance, written authorization from this Board's Executive Officer. Requests for exceptions must be accompanied by a thorough justification and documentation that the exception will not result in adverse impacts to water quality or public health and safety.

Reclaimed Water System

17. There shall be no cross-connection between potable water supply and piping containing reclaimed water.

18. An air-gap separation must be provided between any reclaimed water system (storage or distribution) and any domestic or well water system used as supplemental irrigation water sources.

19. All domestic water service connections to reclaimed water use areas shall be equipped with an air-gap separation device.

20. There shall be at least a 10 foot horizontal and a one foot vertical separation between all pipelines transporting reclaimed wastewater and pipelines transporting domestic water, with the domestic water pipelines above the reclaimed water pipelines.

21. All equipment, including pumps, piping, valves, storage ponds etc. which may at any time contain reclaimed water shall be adequately and clearly identified with warning signs and the Discharger shall make all necessary provisions, in addition, to inform the public that the liquid contained is reclaimed wastewater and is unfit for human consumption.

C. Wastewater Treatment Specifications

1. The treatment plants shall be operated by personnel adequately trained in the operations and maintenance of the facilities, and appropriately supervised, to ensure consistent compliance with the requirements of this Order.

2. The wastewater treatment plants shall be equipped with alarm devices to provide warning of high water levels. The power supply for the alarm system shall be independent of the normal power supply.

3. The wastewater treatment system shall be provided with at least one of the following reliability features:

   a. Standby power supply;
   b. Automatically actuated short-term (24 hours) wastewater flow retention or diversion to a less demanding reuse application; or
   c. Automatically actuated long-term (20 days) wastewater storage or diversion to a less demanding reuse application.

4. A supply of materials necessary to achieve the level of disinfection specified by this Order, sufficient to handle the disinfection demand of at least a 7-day period shall be stored on-site at all times.

5. Collected screenings, sludges, and other solids removed from liquid wastes, including sludge accumulated in the ponds, shall be disposed of at a legal point of disposal, and in accordance with the provisions of Chapter 15 of Title 23 of the California Code of Regulations. For the purpose of this requirement, a legal point of disposal is defined as one for which waste discharge requirements have been prescribed or waived by a Regional Water Quality Control Board and which is in full compliance therewith.

D. Provisions

1. The Discharger shall comply with all sections of this Order immediately upon adoption.

2. The Discharger shall comply with the Self-Monitoring Program for this Order, as adopted by the Board and as may be amended by the Executive Officer.

3. The Discharger shall maintain in good working order and operate, as efficiently as possible, any facility or control system installed or as modified to achieve compliance with this Order.

4. The Discharger shall develop and maintain an Operations and Maintenance manual for the Wastewater Treatment Plants. The purpose of this manual is to provide plant operators and regulatory personnel with a source of information describing the plant equipment, recommended operating strategies, process control monitoring, and maintenance activities, necessary to maintain the plants in good working condition and to comply with the requirements of this Order.

5. The Discharger shall submit an updated copy of the Operations and Maintenance Manual to the Board within 120 days of adoption of this Order.

6. In order to comply with Prohibitions A.3 and A.4, and Specifications B.4 and B.5 of this Order, the Discharger shall comply with the following time schedule:

Task	Completion Date
1. Submit detailed design specifications and construction plans for expansion of Pond A, and for diverting surface runoff away from the pond.	April 15, 1991
2. Complete construction of the Pond A expansion and surface runoff diversion project.	October 15, 1991

7. The Discharger may be required to provide increased storage capacity, in addition to that provided by existing ponds and the planned expansion of Pond A, if determined necessary by the Board, based on the results of pond influent and effluent flow monitoring, and/or occurrence of pond overflows or other violations of this Order which could reasonably have been prevented by availablity of additional storage capacity.

8. The Discharger shall develop a contingency plan, acceptable to the Executive Officer, outlining the actions to be taken in the event that effluent quality fails to meet the required standards prescribed by this Order. The plan shall be submitted for to Board staff for review no later than 120 days after adoption of this Order.

9. In the event the Discharger is unable to comply with any of the conditions of this Order due to:

   a. Breakdown of wastewater transport or treatment equipment;
   b. Accidents caused by human error or negligence; or
   c. Other causes such as acts of nature,

   the Discharger shall notify the Board by telephone as soon as the Discharger or the Discharger's agents have knowledge of the incident. Written confirmation of this notification shall be submitted within two weeks of the telephone notification. The written notification shall include pertinent information explaining reasons for the non-compliance and shall indicate what steps were taken to correct the problem and the dates thereof, and what steps are being taken to prevent the problem from recurring.

10. The Discharger shall permit the Board or its authorized representatives, in accordance with Section 13267(c) of the California Water Code:

    a. Entry upon premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order;

    b. Access to and copy of, at reasonable times, any records that must be kept under the conditions of this Order;

    c. Inspection, at reasonable times, of any facility (including monitoring and control equipment), practices, or operations regulated or required under this Order; or

    d. To photograph, sample or monitor, at reasonable times, for the purpose of assuring compliance with this Order.

11. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharge shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to this Board.

12. The Discharger shall file with the Board a Report of Waste Discharge at least 180 days before making any material change in the character, location, or volume of the reuse, except for emergency conditions in which case the Board shall be notified.

13. After notice and opportunity for a hearing, this Order may be terminated or modified for cause including, but not limited to:

    a. Violation of any term or condition contained in this Order;

    b. Obtaining this Order by misrepresentation, or failure to disclose fully all relevant facts;

    c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized reuse; or

    d. Endangerment to public health or environment that can only be regulated to acceptable levels by Order modification or termination.

14. The Board will review this Order periodically and may revise the requirements as necessary to comply with changing State and Federal laws, regulations, policies, or guidelines; changes in this Regional Board's Basin Plan; or changes in the discharge characteristics.

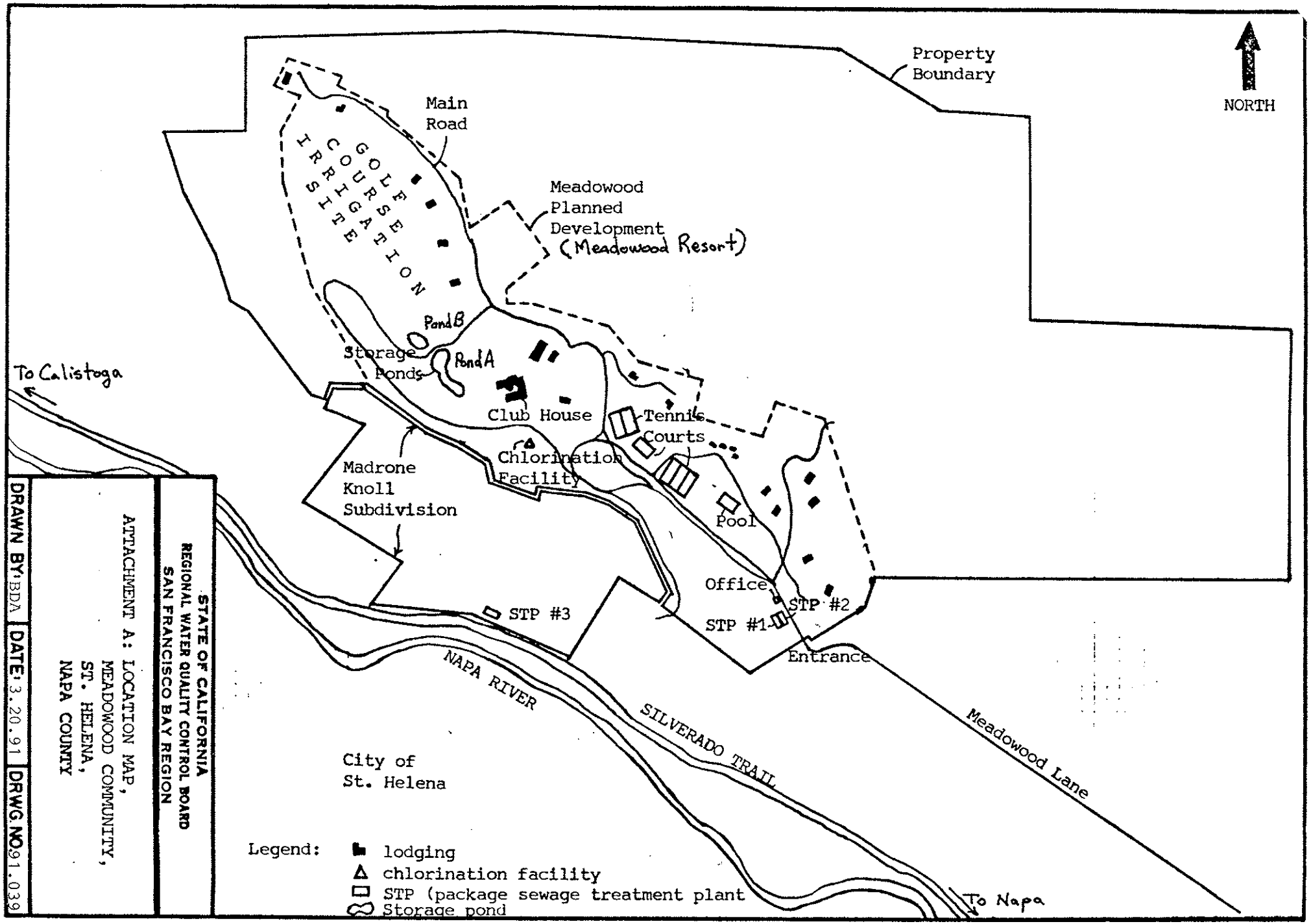
15. The water reclamation requirements prescribed by this Order superced those prescribed by this Board's Order No. 86-68. Order No. 86-68 is hereby rescinded.

I, Steven R. Ritchie, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on March 20, 1991.

STEVEN R. RITCHIE
Executive Officer

Attachments:
Location Map
Self-Monitoring Program

[File No. 2139.3026]
[Originator/BDA]
[Reviewer/RJC]


Property Boundary
NORTH
Main Road
GOLF COURSE IRRIGATION SITE
Meadowood Planned Development (Meadowood Resort)
Pond B
Pond A
Storage Ponds
To Calistoga
Club House
Tennis Courts
Chlorination Facility
Madrone Knoll Subdivision
Pool
Office
STP #2
STP #1
STP #3
Entrance
NAPA RIVER
SILVERADO TRAIL
Meadowood Lane
City of St. Helena
Legend:
lodging
chlorination facility
STP (package sewage treatment plant
Storage pond
To Napa
STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION
ATTACHMENT A: LOCATION MAP,
MEADOWOOD COMMUNITY,
ST. HELENA,
NAPA COUNTY
DRAWN BY: BDA
DATE: 3.20.91
DRWG. NO. 91.039

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

MEADOWOOD RESORT, MEADOWOOD PARTNERSHIP, AND
MEADOWOOD HOME OWNERS ASSOCIATION,
ST. HELENA, NAPA COUNTY

(Water Reclamation Requirements, Order No. 91 - 039)

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C. RECLAIMED WATER USE REPORT

I. GENERAL

Reporting responsibilities of waste dischargers are specified in Sections 13225(a), 13267(b), 13268, 13383, and 13387(b) of the California Water Code and this Regional Board's Resolution No. 73-16.

The principle purposes of a monitoring program by a waste discharger or reclaimed water user, also referred to as a self-monitoring program, are:

1. To document compliance with waste discharge or water reclamation requirements established by this Regional Board; and

2. To facilitate self-policing by the discharger and/or reclaimed water user in the prevention and abatement of pollution arising from waste discharge or reclaimed water use.

II. SAMPLING AND ANALYTICAL METHODS

Sample collection, storage, and analyses shall be performed according to Code of Federal Regulations Title 40, Section 136 (40 CFR S136), the latest edition of Standard Methods for the Examination of Water and Wastewater prepared and published jointly by the American Public Health Association, American Water Works Association and Water Pollution Control Federation, or other methods approved and specified by the Executive Officer of this Regional Board.

Water and waste analyses shall be performed by a laboratory approved for these analyses by the State Department of Health Services (DOHS), or a laboratory waived by the Executive Officer from obtaining a DOHS certification for these analyses.

The director of the laboratory whose name appears on the certification, or his/her laboratory supervisor who is directly responsible for the analytical work performed shall supervize all analytical work including appropriate quality assurance/quality control procedures in his/her laboratory and shall sign all reports of such work submitted to the Regional Board.

All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

III. DEFINITION OF TERMS

A. A grab sample is an individual sample collected in a short period of time not exceeding 15 minutes. Grab samples represent only conditions existant at the time of sampling.

B. A flow sample is the accurate measurement of the flow volume over a given period of time using a properly calibrated and maintained flow measuring device. Flows calculated from properly maintained pump useage records for an accurately calibrated pump are acceptable.

C. Freeboard is defined as the vertical distance between the water surface and the top of the water impoundment containment (perimeter dike, berm or outlet structure).

D. Standard Observations

1. Pond Area

(a) For each pond, determine freeboard at the lowest point of the pond containment structure.

(b) Evidence of seepage from the pond (Show affected area on sketch, and include estimated volume or flow rate).

(c) Odor from ponds: If present, indicate apparent source or cause, characterization, direction of travel, and area affected by the odors.

(d) Warning signs properly posted to inform public that ponds contain reclaimed wastewater which is not safe for drinking or contact.

2. Irrigation Area (Golf Course)

(a) Evidence of reclaimed water escaping the irrigation area through surface runoff or airborne spray (Show affected area on a sketch).

(b) Evidence of reclaimed water used on unauthorized areas, or sprayed on vehicles, buildings, drinking water or food handling facilities, or surface waterways.

(c) Odor from irrigation area: If present, indicate apparent source or cause, characterization, direction of travel, and area affected by the odors.

(d) Evidence of ponding of reclaimed water, and/or evidence of mosquitoes breeding within the irrigation area due to ponded water.

(e) Warning signs properly posted to inform public that water used for irrigation is reclaimed water which is not safe for drinking or contact.

IV. DESCRIPTION OF SAMPLING AND OBSERVATION STATIONS

NOTE: A map or sketch of the facility site showing the locations of all stations described below shall accompany the first monitoring report following adoption of this Self-Monitoring Program, and subsequent reports when station locations are changed or a violation is reported.

Station	Description
A. TREATMENT PLANT EFFLUENT	
STP-1, STP-2, and STP-3	Located at any point in the effluent from each package treatment plant (Plants 1, 2, and 3 respectively), downstream of the filtration process, prior to being combined with other waste streams.
B. COMBINED DISINFECTED EFFLUENT	
E-001	Located at a point in the effluent from the disinfection facility where all waste streams are present and the effluent has had adequate contact time with the disinfectant, prior to being discharged to the storage ponds.
C. STORAGE PONDS	
P-A and P-B	Located at a point in each storage pond (Pond A and Pond B, respectively), within one foot of the water surface and about two to three feet from the water's edge, representative of the pond water.
P-OUT	Located at a point in the pond effluent (golf course irrigation) pumping or distribution apparatus where all pond water used for irrigation is present.
D. IRRIGATION WELL WATER	
G-1	At an existing well, used only as a supplemental irrigation water supply, located in the golf course area upslope from Pond B.
E. OBSERVATIONS STATIONS	
L-1 through L-8	Pond Levee - equidistantly spaced points, at the ends, and midpoints of the longer sides, of the pond perimeter (levee), for each pond (eg - 4 points at each pond).
I-1 through I-'n'	Irrigation Area (Golf Course) - Located at equidistantly spaced points, separated by not more than 1000 feet, around the periphery of the spray irrigation area.

V. SCHEDULE OF SAMPLING, MEASUREMENTS, AND ANALYSES

The Discharger is required to perform observations, sampling, measurements and analyses according to the schedule given in Table 1 and Table 1 Footnotes (Attachment A).

VI. REPORTS TO BE FILED WITH THE REGIONAL BOARD

A. Self-Monitoring Reports

Written reports shall be filed regularly for each calendar month.
Reports shall be submitted to this Regional Board's office no later than the fifteenth day of the month following the monitoring period. The reports shall consist of the following:

1. Letter of Transmittal

A letter transmitting the self-monitoring reports should accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory.

The transmittal letter shall contain a statement by the Discharger, or the Discharger's authorized agent, under penalty of perjury, that to the best of the signer's knowledge the report is true, accurate and complete.

2. Results of Analyses and Observations

a. Tabulations of the results from each required analysis and/or observations specified in Table 1 (Attachment A) by date, time, type of sample, and sample station.

b. Completed Reclaimed Water Storage Pond Report and Reclaimed Water Use Report forms (Attachments B and C, respectively), or equivalent reports of all required observations. (Note: Reclaimed Water Use Reports are only required for months when irrigation with reclaimed water occurs.)

B. Report of Permit Violation

In the event the Discharger violates, or threatens to violate the conditions of the waste discharge requirements and prohibitions due to:

a. Maintenance work, power failure, or breakdown of wastewater transport or treatment equipment;

b. Accidents caused by human error or negligence; or

c. Other causes such as acts of nature,

the Discharger shall notify the Regional Board office by telephone as soon as the Discharger or the Discharger's agents have knowledge of the incident. Written confirmation of this notification shall be submitted within two weeks of the date of the incident. The written notification shall include pertinent information explaining reasons for the non-compliance and shall indicate what steps were taken to correct the problem and the dates thereof, and what steps are being taken to prevent the problem from recurring.

I, Steven R. Ritchie, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in the Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 91 - 039.

2. Is effective on the date shown below.

3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the Discharger and revisions will be ordered by the Executive Officer.

Lawrence P. Kolb
for
STEVEN R. RITCHIE
Executive Officer

Effective Date 4/4/91

Attachments:

A. Table 1 - Schedule for Sampling, Measurements and Analyses
B. Reclaimed Water Storage Pond Report form
C. Reclaimed Water Use Report form

[File No. 2139.3026]
[Originator/ BDA]
[Reviewer/ RJC]

MEADOWOOD RESORT - WATER RECLAMATION REQUIREMENTS (Order 91-039)
SELF-MONITORING PROGRAM

ATTACHMENT A

TABLE 1

SCHEDULE FOR SAMPLING, MEASUREMENTS AND ANALYSES (1)

SAMPLING STATIONS -->	Foot note	STP-1, STP-2 & STP-3		E-001	P-A & P-B	P-OUT	G-1	All L	All I
Type of Sample -->		Flow	G	Flow G	G	Flow	Flow G	O	O
Parameter (units)									
Flow Rate (gpd)	(2)	D							
Flow Volume (gallons)	(2)	M		M		M	M		
BOD, 5-day (mg/l)			M	2W					
Total Suspended Solids (mg/l)			M	2W					
pH (units)				2W	M				
Dissolved Oxygen (mg/l)				2W	M				
Dissolved Sulfide (mg/l)	(3)			2W	M				
Chlorine Residual (mg/l)				5/W					
Total Coliform (MPN/100 ml)				5/W			Q		
Nitrate Nitrogen (mg/l)							Q		
Total Dissolved Solids (mg/l)							Q		
All Applicable Standard Observations	(4)							W	W

LEGEND:

Type of Sample
Flow = Flow measurement
G = Grab Sample
O = Observations

Sampling Frequency
D = Daily
5/W = Daily, five days per week
W = Weekly
2W = Once every two weeks
M = Monthly
Q = Quarterly (every 3 months)

TABLE 1 FOOTNOTES

(1) This Self-Monitoring Program is applicable during the entire year, except that: Flow at P-OUT, and Observations at All I stations, are only required when irrigation with reclaimed water occurs.

(2) Flow Rate: Continuous flow measurement, with Daily flowmeter reading and reporting for effluent flows from treatment Plants 1, 2 and 3. Flows for Plants 1 and 2 may be reported as a combined flow of the Plant 1 & 2 complex.

Flow Volume: Measure and report total flow volume for each calendar month.

G-1 Flow is to measure all water pumped from this irrigation supply well into the storage ponds.

(3) Dissolved Sulfides: Analysis required only when Dissolved Oxygen is less than 2.0 mg/l.

(4) Observations of Irrigation Area (All I stations) are to be conducted during irrigation whenever possible, but in all cases, no later than 12 hours following irrigation operations.

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ATTACHMENT B

RECLAIMED WATER STORAGE POND REPORT

1. Reporting Period (Month/Year): _____

2. Total Plant Flow into Pond (E-001)(gallons): _____

3. Total Well Flow into Pond (G-1)(gallons): _____

4. Pond Water Quality Analyses (Monthly):

Parameter	Sample Date	Pond A	Pond B
pH (units)			
Dissolved Oxygen (mg/l)			
Dissolved Sulfides (mg/l)			

5. Required Standard Observations (as defined in SMP Part III):
[For each inspection, record date, time, pond freeboard, and 'yes' or 'no' for other observations, according to observed conditions. All stations are to be inspected. If any violations are observed, record station(s) where violations were observed.]

Inspection Date and Time: --->					
Pond Freeboard (feet) Pond A:					
Pond B:					
Evidence of Seepage from Ponds					
Nuisance Odors from Ponds					
Warning Signs Not Properly Posted					

6. If any observations were yes, indicating a violation, a written report containing the following information shall be submitted:
   a. Show location of violation on a sketch of the site.
   b. Explain cause and extent of violation.
   c. Describe corrective actions taken, date(s) compliance was achieved, and date/time regular pond use was resumed.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

_____ _____
Signature of Operator Date

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ATTACHMENT C

RECLAIMED WATER USE REPORT

1. Reporting Period (Month/Year): _____

2. Circle dates when reclaimed water was used: 1 2 3 4 5 6 7 8 9 10

   11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

3. Total Monthly Flow Used (gallons): _____
   (Pond effluent to irrigation; Station P-OUT)

4. Required Standard Observations (As defined in SMP Part III.D.):
   [For each inspection, record date, time, and 'yes' or 'no' for each observation, according to observed conditions. All stations are to be inspected. If any violations are observed, record station(s) where violations were observed.]

Inspection Date and Time:					
Escape of Reclaimed Water from Site					
Spray on Unauthorized Areas					
Nuisance Odors from Reclaimed Water					
Prolonged Ponding of Reclaimed Water					
Mosquito Breeding					
Warning Signs Not Properly Posted					

5. If any of the above observations were yes, a written report containing the following information shall be submitted:

   a. Show location of violation on a sketch of the site.
   b. Explain cause and extent of violation.
   c. Describe corrective actions taken, date(s) compliance was achieved, and date/time reclaimed water use resumed.

6. I certify that the information in this report, to the best of my knowledge, is true and correct.

_____ _____
Signature of Operator Date